

REMARKS

The application has been reviewed in light of the Office Action dated May 22, 2003. Claims 1-64 are currently pending in this application, with claims 1, 30, and 59-64 being in independent form. By the present amendment, independent claims 1, 30, and 59-64 have been amended. It is submitted that no new matter has been added and no new issues have been raised by the present amendment.

Applicant notes the indication in the Office Action that claims 24 and 53 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. It is respectfully submitted, however, that independent claims 1 and 30 are patentable over the cited art for at least the reasons set forth below, obviating the need to rewrite claims 24 and 53 as suggested in the Office Action.

Regarding the objection to the declaration, Applicant respectfully submits herewith an application data sheet providing the complete mailing address of the inventor. Withdrawal of the objection to the declaration is respectfully requested.

Without conceding the propriety of the objection, the title of the application has been amended to read --METHOD AND APPARATUS FOR IMAGE FORMING AND EFFECTIVELY PERFORMING SHEET FEEDING USING A SHEET FEED ROLLER AND A TILT MEMBER--. Withdrawal of the objection to the title is respectfully requested.

Claims 1-3, 5, 9-21, 23, 30-32, 34, 38-50, 52, and 59-64 have been rejected under 35 U.S.C. ' 102(b) as allegedly being anticipated by U.S. Patent No. 4,535,981 to Watanabe et al. Claims 1-3, 5, 9-22, 25-32, 34, 38-51, and 54-64 have been rejected under 35 U.S.C. ' 102(b) as allegedly being anticipated by U.S. Patent No. 5,996,989 to Cahill et al. Claims 1,

6-8, 30, and 35-37 have been rejected under 35 U.S.C. ' 102(b) as allegedly being anticipated by U.S. Patent No. 5,277,417 to Moritake et al. Claims 1-4 and 30-33 have been rejected under 35 U.S.C. ' 102(e) as allegedly being anticipated by U.S. Patent No. 6,318,716 to Okuda.

Applicant has carefully considered the Examiner's comments and the cited art, and respectfully submits that independent claim 1 is patentably distinct from the cited art for at least the following reasons.

Independent claim 1 relates to a sheet feeder for separating sheets stacked on a pivotable sheet material stacking member and feeding the sheets, one by one, from the topmost sheet. The sheet feeder comprises a sheet feed roller configured to come in pressing contact with the topmost sheet for feeding the sheet to a separator, and a tilt member configured to come in pressing contact with the sheet feed roller and including a tilt face, the sheet feed roller having a front end running against the tilt face, the tilt member having a contact face in contact with the sheet feed roller, and the contact face being in the shape of a narrow raised edge extending along an axial direction of the sheet feed roller.

Watanabe et al., as understood by Applicant, relates to a paper sheet feeding arrangement for use in a copying apparatus or the like, which is capable of positively preventing paper sheets from wrinkling, bending, etc. during withdrawal of a paper sheet cassette by returning the paper sheet having a projecting leading edge back into the paper sheet cassette in association with a multi-sheet feeding prevention mechanism when the cassette is released from a paper feeding section.

Referring to Figs. 2 and 3 of Watanabe et al., the Office Action states that Watanabe et al. discloses "Y [a] tilt member having a contact face (top of 72, indicated by arrow 70) in

contact with said sheet feed roller in the shape of an edge along an axial direction of the sheet feed roller. The tilt member, tilt face, and contact face all comprise portions which can be interpreted as 'edges'" (see Office Action, p. 3, Ins. 22-26). Applicant respectfully disagrees.

As understood by Applicant, the elements depicted in Figs. 2 and 3 of Watanabe et al. cited by the Office Action relate to a multi-sheet feeding prevention mechanism (element 70)(see Watanabe et al., col. 3, Ins. 49-51), and to a friction member (element 72)(see id., col. 5, Ins. 20-21).

It is respectfully submitted that the above-cited interpretation of the tilt member, tilt face, and contact face as "edges" in the Office Action is unclear.

In any event, the friction member of Watanabe et al., as understood by Applicant, has a substantially rectangular cross section, with a substantially planar upper face contacting the paper feeding roller (see id., Fig. 3). It is respectfully submitted that Watanabe et al. does not disclose or suggest a tilt member having a contact face in contact with the sheet feed roller, and the contact face being in the shape of a narrow raised edge extending along an axial direction of the sheet feed roller, as recited in independent claim 1.

Accordingly, Applicant submits that independent claim 1 is patentably distinct from the cited art for at least the above reasons.

Independent claims 30 and 59-64 are believed to be patentable over the cited art for at least similar reasons.

Cahill et al., as understood by Applicant, apparently relates to a sheet separator friction pad. A sheet feeding apparatus having an edge aligned system always maintains a nip between an intermittently driven pick roll and a friction or separator pad. When a top sheet of a stack is being advanced by the pick roll, a first spring exerts a first force on the friction or

separator pad to enable advancement and separation of the top sheet. When the pick roll is stopped, a second spring exerts a second force substantially smaller than the first force on the friction or separator pad but sufficient to maintain the nip between the pick roll and the friction of separator pad to retard.

The Office Action states that Cahill et al. discloses "Y [a] feeder comprising a roller (24) and a tilt member (55) which has a tilt face, wherein the roller has a front end running against the tilt face, said tilt member having a contact face (indicated by arrow 56) in contact with said sheet feed roller in the shape of an edge along an axial direction of the sheet feed roller. The tilt member, tilt face, and contact face all comprise portions which can be interpreted as 'edges' (see Office Action, p. 5, lns. 10-15). Applicant respectfully disagrees.

As understood by Applicant, the elements of Cahill et al. cited by the Office Action relate to a pad housing (element 55) and a separator pad (element 56) fixed to the pad housing (see Cahill et al., col. 5, lns. 21-22; Figs. 3 and 6). The separator pad is held against the pick roll by force exerted by a buckling spring (see id., lns. 37-41).

As understood by Applicant, the separator pad of Cahill et al. has a substantially rectangular cross section, with a substantially planar upper face contacting the pick roll (see id., Figs. 3 and 6).

It is respectfully submitted that Cahill et al. does not disclose or suggest a tilt member having a contact face in contact with the sheet feed roller, and the contact face being in the shape of a narrow raised edge extending along an axial direction of the sheet feed roller, as recited in independent claim 1.

Accordingly, Applicant submits that independent claim 1 is patentably distinct from the cited art for at least the above reasons.

Independent claims 30 and 59-64 are believed to be patentable over the cited art for at least similar reasons.

Moritake et al., as understood by Applicant, apparently relates to a sheet-material transporting device and automatic sheet-material feeder. The sheet-material transporting device includes a separation roller which is rotated in a predetermined direction, and a retarding member having an opposing surface opposing the separation roller, and forming a sheet-material transport passage between the opposing surface and the separation roller. The device is provided with a pressing member disposed in the opposing surface. The pressing member has a pressing surface which projects from the opposing surface and has a coefficient of friction smaller than that of the opposing surface. The pressing surface of the pressing member is caused to retract from its projecting position in correspondence with the thickness of the sheet material inserted into the transport passage.

The Office Action states that Moritake et al. discloses "Y [a] tilt member clearly [having] an edge (also shown in figure 5) which runs parallel to the longitudinal axis of the roller" (see Office Action, p. 7, lns. 15-16). Applicant respectfully disagrees.

As understood by Applicant, element 46 of Moritake et al. cited by the Office Action relates to an elongated retard plate (see Moritake et al., col. 5, lns. 59-68; col. 6, lns. 1-5). The elongated retard plate has a substantially rectangular cross section, and is arranged such that an opposing face is located in proximity to a lowermost portion of the separation roller (see id.).

Therefore, it is respectfully submitted that Moritake et al. does not disclose or suggest a tilt member having a contact face in contact with the sheet feed roller, and the contact face

being in the shape of a narrow raised edge extending along an axial direction of the sheet feed roller, as recited in independent claim 1.

Accordingly, Applicant submits that independent claim 1 is patentably distinct from the cited art for at least the above reasons.

Independent claim 30 is believed to be patentable over the cited art for at least similar reasons.

Okuda, as understood by Applicant, relates to a separating apparatus having a sheet feeding unit for feeding sheets, a separating pad for separating the sheets between the separating pad and the sheet feeding unit, a pad member for holding the separating pad, a spring for biasing the pad holding member to thereby bring the separating pad into pressure contact with the sheet feeding unit, a support for supporting the pad holding member on a frame pivotably and movably in a sheet feeding direction, and an abutting surface against which the pad holding member abuts when the pad holding member moves to a downstream side in the sheet feeding direction.

The Office Action states that Okuda discloses "Y [a] tilt member (43) with tilt face (17) in the shape of an edge" (see Office Action, p. 8, lns. 1-2). Applicant respectfully disagrees.

As understood by Applicant, element 17 of Okuda cited by the Office Action relates to a separating pad (see Okuda, col. 4, lns. 47-64). The separating pad is provided on the downstream side of the pressure plate and is urged toward the sheet feeding roller by a separating spring (see id.). It is respectfully submitted, however, that there is no teaching or suggestion in Okuda that the separating pad is in the shape of an edge.

Therefore, it is respectfully submitted that Okuda does not disclose or suggest a tilt member having a contact face in contact with the sheet feed roller, and the contact face being in the shape of a narrow raised edge extending along an axial direction of the sheet feed roller, as recited in independent claim 1.

Accordingly, Applicant submits that independent claim 1 is patentably distinct from the cited art for at least the above reasons.

Independent claim 30 is believed to be patentable over the cited art for at least similar reasons.

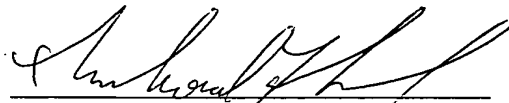
The Office is hereby authorized to charge any additional fees that may be required in connection with this response and to credit any overpayment to our Deposit Account No. 03-3125.

If a petition for an extension of time is required to make this response timely, this paper should be considered to be such a petition, and the Commissioner is authorized to charge the requisite fees to our Deposit Account No. 03-3125.

If a telephone interview could advance the prosecution of this application, the Examiner is respectfully requested to call the undersigned attorney.

Entry of this response and allowance of this application are respectfully requested.

Respectfully submitted,



RICHARD F. JAWORSKI

Reg. No. 33,515

Attorney for Applicant

Cooper & Dunham LLP

Tel.: (212) 278-0400